

**V.C. Summer Nuclear Station Units 2 & 3**

**Quarterly Report to the South Carolina Office of Regulatory Staff  
Submitted by South Carolina Electric & Gas Company  
Pursuant to Public Service Commission Order No. 2009-104(A)**

**Quarter Ending December 31, 2013**

**I. Introduction and Summary**

**A. Introduction**

This quarterly report is submitted by South Carolina Electric & Gas Company (SCE&G or the Company) to the Public Service Commission of South Carolina (the Commission) and the South Carolina Office of Regulatory Staff (ORS). It is submitted in satisfaction of the requirements of S.C. Code Ann. § 58-33-277 (Supp. 2012) and the terms of Commission Order No. 2009-104(A). This report provides updated information concerning the status of the construction of V.C. Summer Nuclear Station (VCSNS) Units 2 & 3 (the Units) and provides the current capital cost forecasts and construction schedules for the Units as of the close of the quarter. In Order No. 2012-884 dated November 15, 2012, the Commission approved updated construction schedules for the Units. This report provides a comparison of the current schedules and forecasts against those approved in Order No. 2012-884.

**B. Structure of Report and Appendices**

The current reporting period is the quarter ending December 31, 2013. The report is divided into the following sections:

- Section I: Introduction and Summary;
- Section II: Progress of Construction of the Units;
- Section III: Anticipated Construction Schedules;
- Section IV: Schedules of the Capital Costs Incurred Including Updates to the Information Required by S.C. Code Ann. § 58-33-270(B)(6) (the Inflation Indices);
- Section V: Updated Schedule of Anticipated Capital Costs; and
- Section VI: Conclusion.

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**Appendices 1, 2, and 4** to this report contain detailed financial, milestone and other information updating the schedules approved by the Commission in Order No. 2012-884. For reference purposes, **Appendix 3** provides a copy of the capital cost schedule for the project as approved in Order No. 2012-884. **Appendix 5** provides a list of the License Amendment Requests (LARs) filed by SCE&G with the Nuclear Regulatory Commission (NRC).

A confidential and a public version of this report and its attachments are being provided. Unless otherwise specified, all cost information reflects SCE&G's 55% share of the project's cost in 2007 dollars. Attached to the end of the report is a glossary of acronyms and defined terms used.

### **C. Construction Schedule and Milestones**

As the report indicates, the Company has met all current construction milestones approved by the Commission in Order No. 2012-884, taking into account the contingencies authorized in Order No. 2009-104(A). There are 146 specific milestones for reporting purposes. As of December 31, 2013, 95 have been completed. Comparing the scheduled milestone completion dates as of the date of this report to the milestone completion dates approved by the Commission in Order No. 2012-884, the completion dates of 47 milestones have changed. Of these, two have been accelerated and 45 have been delayed for between one and 16 months.

**The Unit 2 and Unit 3 Construction Schedules.** During the third quarter of 2013, WEC/CB&I provided SCE&G with revised Unit 2 and Unit 3 construction schedules (Revised Unit 2 and Unit 3 Schedules) which were based on a reevaluation of the submodule production schedule at the CB&I facility in Lake Charles, LA. Based on these schedules, SCE&G continues to project that Units 2 and 3 will be completed in the last quarters of 2017 and 2018 or the first quarters of 2018 and 2019, respectively. Those projected dates remain within the 18-month schedule contingency provided for in Order No. 2009-104(A).

During the fourth quarter of 2013, WEC/CB&I began a full re-baselining of the Unit 2 and Unit 3 construction schedules to incorporate into the schedule a more detailed evaluation of the engineering and procurement activities necessary to accomplish the schedule and to provide a detailed reassessment of the impact of the Revised Unit 2 and Unit 3 Schedules on engineering and design resource allocations, procurement schedules, construction work crew assignments, and other items. This result will be a revised fully integrated construction schedule (Revised Fully Integrated Construction Schedule) that will provide detailed and itemized information on individual budget and cost categories, cost estimates at completion for all non-firm/fixed scopes of work, and the timing of specific construction activities and cash flow requirements. SCE&G anticipates that the Revised Fully Integrated Construction Schedule and the cost estimate at completion for all

non-firm/fixed scopes of work will be finalized in the third quarter of 2014. SCE&G plans to reevaluate and reschedule its Owners Cost estimates and cash flow requirements in light of the new schedule.

#### **D. Construction Costs and Cost Forecasts**

Spending through December 31, 2013, in current dollars was approximately \$563 million below the capital cost schedule approved in Order No. 2012-884. The present cash flow forecast indicates that the Company will be able to complete the Units for \$4.548 billion in 2007 dollars, which is the amount approved in Order No. 2012-884. The current cost estimates include changes in timing of costs and minor shifts in costs among cost categories that occur in the normal course of managing the project.

**Agreement to Purchase an Additional 5% Interest in the Completed Project from Santee Cooper.** On January 27, 2014, subsequent to this reporting period, SCE&G and Santee Cooper announced that SCE&G will purchase from Santee Cooper an additional 5% interest in the project, or approximately 110 MW of generating capacity. When complete, this purchase will increase SCE&G's ownership of the project to 60%. The purchase will take place in three stages beginning on the commercial operation date (COD) of Unit 2. SCE&G will purchase a 1% interest in the project on the first business day following the Unit 2 COD and two additional increments of 2% interest in the project no later than the first business days following the first and second anniversary dates of the Unit 2 COD, respectively. The price paid will reflect Santee Cooper's actual cost of its interest in the project as of the date of each conveyance and will include appropriate allocations of Santee Cooper's Owners Cost and financing cost. The total cost of the 5% interest is estimated to be approximately \$500 million. SCE&G believes that once the new Units are on-line, the cost of the \$500 million can be financed from internal sources without the need for long-term external financing.

The agreement with Santee Cooper provides that Santee Cooper will not transfer any of its remaining interest in the project to third parties until the entire project is completed (In addition, any attempted transfer by either party, whether before or after the completion of the project, is subject to restrictions contained in the existing agreements between the parties). The agreement is subject to customary closing conditions and regulatory approvals.

The transaction will not affect the payment obligations between the parties during the construction period for either Unit; nor is it anticipated that the payments would be reflected in a revised rates filing under the Base Load Review Act (BLRA) during construction. All amounts set forth in this Quarterly Report are based on SCE&G's existing 55% interest, except where expressly stated to be based upon 100% of the cost.

**Cash Flow Forecasts and the Revised Unit 2 and Unit 3 Schedules.** The cash flow forecasts provided in this report reflect changes in the timing of certain payments to WEC/CB&I based on the Revised Unit 2 and Unit 3 Schedules. Although the timing of cash flows has been revised, no increases in costs in 2007 dollars resulting from the Revised Unit 2 and Unit 3 Schedules are included in the cash flow estimates provided in this report.

SCE&G has not accepted responsibility for any of the additional estimated costs arising as a result of the Revised Unit 2 and Unit 3 Schedules or the Revised Fully Integrated Construction Schedule when it becomes available. The Company expects to continue discussions with WEC/CB&I regarding responsibility for any resulting increase in costs when the Revised Fully Integrated Construction Schedule is issued. SCE&G has previously reported that a reasonable estimate of the cost impact of the changes reflected in Revised Unit 2 and Unit 3 Schedules would be approximately \$200 million in future dollars. This amount reflects SCE&G's 55% share of the Target portion of the Engineering, Procurement and Construction Agreement (EPC Contract), Owners Cost and escalation. This estimate was prepared by the Company and not WEC/CB&I. It remains the Company's best current estimate of the additional costs involved. In addition, the EPC Contract provides for liquidated damages in the event of a delay in the completion of the Units which have not yet been factored into any estimated increase. Ultimately, SCE&G believes that the portion of the \$200 million estimate for which SCE&G will be responsible, if any, will be substantially reduced once all relevant factors are considered.

In Order No. 2009-104(A), the Commission recognized that forecasts of Allowance for Funds Used During Construction (AFUDC) expense and escalation would vary over the course of the project and required those forecasts to be updated with each quarterly report. Escalation indices were issued in November 2013 for the period of January through June 2013 and have been used in forecasting the construction costs for the project that are presented here.

**Chart A** below compares the current capital cost forecast to the forecast presented in the last quarterly report. This chart shows an increase in Gross Construction Costs of \$28.9 million over the life of the project. With each quarterly update, a quarter that had been subject to the five-year escalation rate becomes subject to the one-year rate. The figures reported on **Chart A** also include the effect of calculating escalation on an updated cash flow projection for the project.

**Chart A: Reconciliation of Capital Cost (\$000)**

<b><u>Forecast Item</u></b>	<b><u>Projected @ 12/31/13 (Five-Year Average Escalation Rates)</u></b>	<b><u>Projected @ 9/30/13 (Five-Year Average Escalation Rates)</u></b>	<b><u>Change</u></b>
Gross Construction	\$5,680,188	\$5,651,338	\$28,850
Less: AFUDC	\$261,355	\$229,672	\$31,683
Total Project Cash Flow	\$5,418,833	\$5,421,666	(\$2,833)
Less: Escalation	\$870,428	\$873,261	(\$2,833)
<b>Capital Cost, 2007 Dollars</b>	<b>\$4,548,405</b>	<b>\$4,548,405</b>	<b>\$0</b>

**Chart B** compares the current forecast of gross construction costs, including current escalation, to the forecast on which the Commission relied in adopting Order No. 2012-884. Chart B shows that the forecasted capital cost of the Units in 2007 dollars has not changed. Due to the changes in forecasted escalation and AFUDC (see Section I.F below) the cost of the plant in future dollars has decreased by approximately \$74.4 million since Order No. 2012-884 was issued.

**Chart B: Reconciliation of Capital Cost (\$000)**

<b><u>Forecast Item</u></b>	<b><u>Projected @ 12/31/13 (Five-Year Average Escalation Rates)</u></b>	<b><u>As Forecasted and Approved In Order 2012-884</u></b>	<b><u>Change</u></b>
Gross Construction	\$5,680,188	\$5,754,565	(\$74,377)
Less: AFUDC	\$261,355	\$237,715	\$23,640
Total Project Cash Flow	\$5,418,833	\$5,516,849	(\$98,016)
Less: Escalation	\$870,428	\$968,444	(\$98,016)
<b>Capital Cost, 2007 Dollars</b>	<b>\$4,548,405</b>	<b>\$4,548,405</b>	<b>\$0</b>

**Chart C** below shows the current forecasts of the cost of the Units compared to the cost forecasts underlying the initial BLRA order, which was issued by the Commission in 2009, and the update orders that the Commission issued subsequently. The decline in capital cost forecasts in 2007 dollars between Order No. 2010-12 and 2011-345 reflects

the removal of Owner's contingency amounts from the forecasts as required by the opinion of the Supreme Court of South Carolina in *South Carolina Energy Users Comm. v. South Carolina Pub. Serv. Comm'n*, 388 S.C. 486, 697 S.E.2d 587 (2010). This chart shows that while the cost of the project in 2007 dollars has increased by \$13 million since the initial forecasts, the cost of the project in future dollars is approximately \$633 million below the initial forecast.

**Chart C: Summary of Nuclear Filings (billions of \$)**

<b><u>Forecast Item</u></b>	<b><u>Order No. 2009-104(A)</u></b>	<b><u>Order No. 2010-12</u></b>	<b><u>Order No. 2011-345</u></b>	<b><u>Order No. 2012-884</u></b>	<b><u>Projected @ 12/31/2013</u></b>
Capital Cost, 2007 Dollars	\$4.535	\$4.535	\$4.270	\$4.548	\$4.548
Escalation	\$1.514	\$2.025	\$1.261	\$0.968	\$0.871
Total Project Cash Flow	\$6.049	\$6.560	\$5.531	\$5.517	\$5.419
AFUDC	\$0.264	\$0.316	\$0.256	\$0.238	\$0.261
<b>Gross Construction</b>	<b>\$6.313</b>	<b>\$6.875</b>	<b>\$5.787</b>	<b>\$5.755</b>	<b>\$5.680</b>

#### **E. Escalation Rates**

As provided in Order No. 2009-104(A), the most current one-year inflation indices are used to escalate costs occurring in the twelve-month period after the date of each quarterly report. The most current escalation indices are found in the Handy-Whitman July 2013 update which was issued in November 2013 and reports data for the period January through June 2013. Those rates are reflected in this report. The approved capital cost targets have been adjusted to reflect the currently reported historical escalation rates. The forecasted costs provided here reflect SCE&G's calculations related to the WEC/CB&I Claims, which change the index applicable to Firm with Indexed Adjustment cost categories going forward from a floating Handy-Whitman adjustment to a fixed rate for the life of the project.

As shown on **Appendix 4**, utility construction cost escalation rates were at historically high levels during the period 2005-2008, and have since dropped. Current

escalation rates are shown below on **Chart D**. When compared to the previous Handy-Whitman release, the most recent update shows a downward trend in the one-year and five-year average rates.

**Chart D: Handy-Whitman Escalation Rates**

<b><u>Escalation Rate Comparison</u></b>		
	<b>Jul-Dec 2012</b>	<b>Jan-June 2013</b>
<b><u>HW All Steam Index:</u></b>		
One-Year Rate	<b>4.84%</b>	<b>2.05%</b>
Five-Year Average	<b>3.25%</b>	<b>2.18%</b>
Ten-Year Average	<b>4.95%</b>	<b>4.77%</b>
<b><u>HW All Steam/Nuclear Index:</u></b>		
One-Year Rate	<b>5.19%</b>	<b>2.05%</b>
Five-Year Average	<b>3.32%</b>	<b>2.22%</b>
Ten-Year Average	<b>4.99%</b>	<b>4.79%</b>
<b><u>HW All Transmission Plant Index:</u></b>		
One-Year Rate	<b>3.29%</b>	<b>1.71%</b>
Five-Year Average	<b>2.10%</b>	<b>1.09%</b>
Ten-Year Average	<b>4.90%</b>	<b>4.91%</b>

#### **F. AFUDC**

Consistent with Order No. 2009-104(A), SCE&G computes AFUDC based on the Federal Energy Regulatory Commission (FERC) approved methodology as applied to the balance of Construction Work in Progress (CWIP) that is outstanding between rate adjustments. SCE&G's projected AFUDC rate is currently 7.27%, compared to the rate of 5.28% that applied when Order No. 2012-884 was issued.

#### **G. Compliance with the Commission-Approved Cumulative Project Cash Flow Target**

The current Cumulative Project Cash Flow target for the project was adopted by the Commission in Order No. 2012-884. In Order No. 2009-104(A), the Commission provided that the applicable Cumulative Project Cash Flow target would be adjusted with each quarterly report to reflect updated escalation data.

**Appendix 2** provides the Commission-approved Cumulative Project Cash Flow target updated for current escalation data. The cash flow targets through June of 2013 have been updated to reflect actual escalation rates. The cash flow targets for the third quarter of 2013 and beyond have been updated based on the most recently available inflation indices, which for purposes of this report, are the indices provided in November 2013 that report data for the period January through June 2013. When final actual indices for 2013 become available, the cash flow data for 2013 will be revised to reflect the actual escalation rates.

**Appendix 2** compares the approved Cumulative Project Cash Flow target to the current cumulative cash flow schedules for the project, which include actual costs where available and SCE&G's working forecasts of annual cash flows for future years. In addition, the project cash flow targets presented on **Appendix 2** for 2012 have been adjusted to reflect timing differences between the billing methodology under the EPC Contract and the calculation of the escalated cash flow targets under Order No. 2009-104(A). Under the EPC Contract, for periods where actual escalation rates are not available, WEC/CB&I bills SCE&G based on a rolling 2-year average of the applicable Handy-Whitman rate and provides adjustments to reflect the actual rate when it is known. An adjustment has been made to **Appendix 2** target calculations to offset the timing differences that arise as a result of WEC/CB&I's approach to estimated billings and credits. This adjustment applies to those EPC Contract cost categories that are subject to indexed escalation.

## **II. Progress of Construction of the Units**

### **A. Construction**

The project continues to maintain an excellent safety record that exceeds industry expectations for projects of comparable size.

The critical path for Unit 2 runs through the successful fabrication of the CA20 modules and the setting of the module on the Nuclear Island (NI) as well as the receipt of CA01 submodules and the successful construction and setting of that module. The critical path for Unit 2 then continues through the completion of the concrete structures in the NI buildings, installation of the horizontal transition between the NI foundations and the shield wall, and completion of the shield wall itself. The critical path for Unit 3 runs through the assembly and setting of the Containment Vessel Bottom Head (CVBH) and then follows a similar course as that of Unit 2.

#### **1. Unit 2 Nuclear Island**



During the period, the first layer of concrete was poured on the Unit 2 NI basemat to fill the area between the Unit 2 CVBH and the basemat. The CVBH forms the base of the Unit 2 Containment Vessel (CV).

Module CA04 is the structure that forms the cavity within the CV in which the lower portion of the Reactor Vessel (RV) will rest. Module CA04 was lifted and set in place inside the CVBH in September of 2013. During the period, work continued to form the exterior concrete walls of the Unit 2 Auxiliary Building. Wall I, which is the eastern exterior wall, of the Unit 2 NI basement, was completed to the first floor level which is approximately 16 feet above the basemat. Other sections of the Unit 2 Auxiliary Building walls were proceeding. Placing of rebar for the structures that will connect the Unit 2 NI Shield Building to the basemat and will form the foundation of the Shield Building also progressed.

## **2. Unit 3 Basemat**

As previously reported, on November 4, 2013, the project team successfully completed placement of the Unit 3 NI basemat. During the period, the project team removed the concrete forms from the basemat and curing of the basemat concrete was successfully completed. At the close of the period, the CR10 Module which will support the Unit 3 CVBH was being constructed in place on the Unit 3 NI basemat.

## **3. Units 2 and 3 Turbine Buildings and Condensers**

By the end of the period, the upper and lower shells of each of the three Unit 2 Condensers had been set in place in the Unit 2 Turbine Building. Work continued to weld together the upper and lower shells of each Condenser and to complete the weld out of the three Condensers. Backfilling continued around the Unit 2 Turbine Building and the installation of concrete foundations for structures to be located at the ground level of the Unit 2 Turbine Building began.

Modules CH80, CH81 A, B, and C and CH82 provide floor beams, columns and other structural steel components in the Unit 2 Turbine Building basement on which floors and decks will be set. During the period, submodules CH81A and CH81B were completed, and work continued on submodule CH81C and module CH82. Module CH80 was completed during the third quarter of 2013.

By the close of the period, fabrication of components of the upper and lower shells of the three Unit 3 Condensers had begun. Backfilling continued around the Unit 3 Turbine Building and associated Circulating Water Pipe (CWP) in preparation for starting construction of the basemat for that building.

#### **4. Unit 2 and Unit 3 Containment Vessel (CV) Fabrication**

The vertical walls of the CV will be composed of three rings of steel plates that are fabricated on site, and are then lifted into place and welded to the CVBH and to each other. During the period, work continued to weld attachment plates on the Unit 2 CV Ring 1 and to coat the ring in preparation for it to be lifted and set in place. At the close of the period, the weld out of Unit 2 CV Ring 2 and radiographic testing (RT) of the Ring 2 welds was nearing completion.

At the close of the period, two of three layers of plates forming the Unit 3 CVBH had been fitted up and welding had begun. The first of four courses of plates that will form Unit 3 CV Ring 1 have been fitted up prior to welding.

Acceptance rates based on the RT of welds on the Units 2 and 3 CVBH and CV Rings remain above 99%.

#### **5. Cooling Towers**

As of the close of the period, Cooling Towers 2A and 3A were structurally complete and mechanical and electrical work continued. Sections of the basemat for Cooling Tower 2B were placed during the period.

#### **6. Unit 2 High-Side Switchyard**

During the period, installation began for concrete foundations for the Unit 2 transformers in the Unit 2 High-Side Switchyard, which is located adjacent to the Unit 2 Turbine Building.

#### **7. Offsite Water System (OWS)**

The concrete pad to accommodate the pre-engineered metal building housing the treatment plant for the OWS was successfully poured during the period and the construction of the building began. The OWS raw water intake structures in the Monticello Reservoir are largely complete.

#### **8. Emergency Response Building (ERB)**

During the period, the equipment bays within the ERB were completed and the personnel areas were nearing completion. The ERB provides office space and housing for the emergency response personnel and equipment for all three units.

#### **9. Workforce**

The project continues to recruit and utilize the majority of construction employees from a skilled craft workforce in the state of South Carolina. More than half of these local workers are from Fairfield, Lexington, Richland, and Newberry counties. CB&I plans to employ approximately 3,000 – 3,500 employees at points during the project, with these numbers fluctuating during the various phases of construction activity. Currently, approximately 2,000 WEC/CB&I personnel and subcontractor personnel are employed on site.

## **B. Equipment and Fabrication**

### **1. Steam Generators**

Welding of the Unit 2 Reactor Coolant Pump (RCP) casings to the Unit 2 Steam Generators is in progress at Doosan's facilities in South Korea. Once the welding is completed and inspected, the Unit 2 Steam Generator will be prepared for packaging and shipment to the site through the Port of Charleston.

Machining, cladding and welding of components of the Unit 3 Steam Generators continued at Doosan's facilities in South Korea with no significant issues.

### **2. Reactor Coolant Pumps**

SCE&G and WEC/CB&I are carefully tracking several issues that have arisen in the testing and inspection of RCPs dedicated to other projects. It is not clear at this time whether these indications will have any bearing on the RCPs for this project. This is a focus area for the project.

### **3. Core Make-Up Tanks, Accumulator Tanks, Pressurizers and the Passive Residual Heat Removal Exchanger (PRHR)**

In November, the Unit 2 Accumulator Tanks and the Unit 2 Core Make-Up Tank arrived at the site from the Mangiarotti Nuclear, S.p.A. (Mangiarotti) facilities in Italy. At the close of the period, the Unit 3 Accumulator Tanks were in transit by sea from Mangiarotti. The Unit 3 Core Make-Up Tanks are in fabrication at the Mangiarotti facilities with work proceeding as expected. The Unit 2 and Unit 3 PRHR and Pressurizers are also in fabrication at those facilities. All major Mangiarotti components are anticipated to be on site in the fourth quarter of 2014.

### **4. Supplier Financial Issues**

As previously disclosed, SCE&G is aware of financial difficulties at a supplier responsible for certain significant components of the project. At SCE&G's request, WEC/CB&I continues to monitor the situation and assess the potential for

disruptions in equipment fabrication and possible responses. Any disruptions are not expected to impact the construction schedule at this time.

## **5. Transformers**

During the reporting period, the four Unit 2 Main Step Up Transformers (three primary transformers and one reserve transformer) were received on site as were two of three Unit 2 Auxiliary Transformers. The final Unit 2 Auxiliary Transformer and the Unit 2 Reserve Auxiliary Transformer have been fabricated and are awaiting shipment. Fabrication of all Unit 3 Transformers is proceeding as expected.

## **6. Reactor Coolant Loop (RCL) Piping**

By the close of the period, all major components of the Unit 2 RCL Piping had been received from Carolina Energy Solutions' (CES) facility in Rock Hill and were ready for installation. The Unit 3 RCL Piping was originally manufactured for use in Unit 2 but deviations from grain size specifications in the metal comprising the piping caused it to be set aside while a review was conducted to determine if the grain size deviations would interfere with ultrasonic testing of the piping during future refueling outages. Disposition of the deviations based on an engineering evaluation showing that testing will not be compromised is expected in the first quarter of 2014. If the disposition is favorable, the Unit 3 RCL Piping will be ready for packaging and shipment to CES for final installation of fittings and instrumentation access points.

## **7. Squib Valves**

Shipment of the completed squib valves for the Units remains on hold as SPX addresses anomalies uncovered during the equipment qualification testing of the valves for use in AP1000 reactors. SCE&G continues to monitor work being done by WEC and SPX to demonstrate that the valves will perform their design basis functions.

As previously reported, WEC/CB&I identified deficiencies in the Quality Assurance/Quality Control (QA/QC) documentation packages related to certain squib valve parts manufactured by SPX sub-contractors. During the period, WEC/CB&I made the decision to require SPX to have these parts remanufactured and the squib valves reassembled with parts that have been properly documented. This is a focus area for the project.

## **8. Information Technology**

**Site Fiber Optic System.** At the close of the period, Fiber Hut 5, which is the principal hub for fiber optic cable serving the Units, was largely complete. At the close of the period, Fiber Hut 2, which will provide redundancy for the system, was approximately 50% complete. Work on the fiber optic cable system is progressing as expected.

**Configuration Management Information System (CMIS).** The CMIS is the system which will store documents and data related to the design and engineering of the Units, the QA/QC records of equipment and construction, operating programs and protocols for the Units, and related documents and data. Phase 1 of the CMIS project involves configuration of the databases and functionality to store this information and make it available for operational purposes. Work on the system is progressing as expected to support turnover of completed Unit 2 plant systems to SCE&G during the third quarter of 2014.

**Work Management System.** The new work management system is being delivered and tested as individual application modules are developed. The initial drafts of 22 of the 24 application modules have been provided to SCE&G and are in active testing. A second, updated draft of the program is expected later in 2014. That draft will include the improvements and revisions made to the legacy program in use at Unit 1 during development of the new program.

## 9. CB&I-LC Module and Submodule Fabrication

Challenges related to fabrication of submodules at the CB&I-LC facility continue to be a focus area of the project:

**The Revised Module Production Schedule.** As indicated in Section II.A, the fabrication and delivery of CA20 and CA01 submodules is a critical path item for both Units. Accordingly, production of these modules remains a very important focus area for the project. SCE&G maintains a presence on site at CB&I-LC to monitor activities at CB&I-LC and interact with CB&I-LC leadership on a regular basis.

All CA20 structural submodules have been received on site. At the close of the period, two of the four major subassemblies that comprise CA20 have been up-righted and set into place on the assembly platen in the Modular Assembly Building (MAB), as have parts of a third. Other components of the subassemblies are being inspected, punch-list items are being corrected and repairs are being made on site. Other components and subassemblies are being prepared to be installed on the platen. The current on-hook date for CA20 is late March of 2014.

Fabrication of module CA03 is progressing at Pegasus Steel's facilities in North Charleston, SC and fabrication of Shield Building structural modules is ongoing at Newport News Industries' (NNI) facilities in Virginia. Monitoring the start-up activities and initial QA/QC audits at these facilities has been a focus area for the project. The work at both facilities is progressing and supports the current construction schedule.

**Shear Stud Spacing.** On November 19, 2013, the NRC granted the LAR requested by SCE&G related to stud spacing in difficult to access areas of submodules. During the period, and in anticipation of the grant of that LAR, all CA20 submodules were reviewed for compliance with the standards contained in the LAR. In many cases, the review confirmed that existing stud placement met those standards. WEC/CB&I is placing additional studs where required.

**QA Program.** During the period, CB&I-LC notified the NRC under 10 CFR 50.55(e) that weaknesses have been identified in the QA program. While the program weaknesses could have resulted in defects as defined by 10 CFR 50.55(e), no such defects have been identified. The issues occurred before CB&I assumed management responsibility for CB&I-LC.

**Fillet Welds.** During the period, removal and rewelding of all CA20 fillet welds was completed.

**Conclusion.** Senior management from both SCE&G and WEC/CB&I continue to monitor the fabrication and delivery process related to submodules. WEC personnel continue to provide onsite engineering support for production at CB&I-LC. SCE&G continues to maintain a permanent resident inspector at the CB&I-LC facility who provides additional monitoring. The fabrication of the submodules continues to be an important area of focus for the project.

## **C. Licensing and Permitting**

As licensee for the Units, SCE&G is directly accountable to the NRC for contractors meeting nuclear safety-related QA/QC requirements both at the project site and at the facilities of its component manufacturers and equipment suppliers worldwide. WEC/CB&I through the EPC Contract is responsible to SCE&G for making sure that these requirements are met.

### **1. NRC Inspections**

On October 22, 2013, the NRC held its Third Quarter 2013 Inspection Exit and provided a summary to SCE&G and WEC/CB&I Management. No violations were documented in the inspection report. The NRC began Unit 3 First Nuclear Concrete (FNC) inspection activities on October 28, 2013. During debriefing,

there was no indication of any findings or violations that required documentation in the inspection report.

## **2. LARs**

The NRC approves changes from the approved licensing basis for nuclear units through the LAR request and review process. SCE&G envisions that filings for LARs will be a normal part of the construction program for the Units going forward under the Combined Operating Licenses (COL). Additionally, if needed, a licensee can submit a Preliminary Amendment Request (PAR) associated with a LAR. Through the PAR process, the licensee can request a notification that the NRC does not object to the licensee installing and testing the proposed changed design feature, at the licensee's risk, pending NRC's review of the LAR.

During the fourth quarter of 2013, SCE&G filed six new LARs with the NRC. The NRC has granted a total of nine LARs. One LAR was granted during the reporting period. Fifteen LARs were pending on December 31, 2013. For ease of reference, a report that tabulates all the LARs submitted by SCE&G to the NRC as of December 31, 2013, is attached as **Appendix 5**.

## **3. Inspections, Tests, Analyses and Acceptance Criteria (ITAACs)**

In the fourth quarter of 2013, SCE&G provided WEC with administrative comments related to the three ITAAC Completion Packages that WEC had submitted to SCE&G for review. The comments were minor and the issues raised in them are being resolved. Pending resolution of these comments, SCE&G has suspended filing new ITAAC Closure Notifications (ICNs) to the NRC. Accordingly, during the period SCE&G did not submit any new ICNs to the NRC. SCE&G anticipates submitting nine more in the first quarter of 2014.

## **4. Major Construction Permits**

No other major construction-related permits are outstanding. Other construction-related permits are anticipated to be obtained in the ordinary course of administering the project.

## **5. BLRA Regulatory Proceedings**

The briefing of the appeals to the South Carolina Supreme Court of Commission Order No. 2012-884, which authorized updates to the cost and construction schedules for the Units under S.C. Code Ann. § 58-33-270(E), is complete and the parties are awaiting a date for oral argument.

**D. Engineering****1. Engineering Completion Status**

As of December 31, 2013, the Units 2 & 3 plant design packages issued for construction (IFC) are 94% complete. IFC delivery from WEC/CB&I continues to be a focus area and SCE&G is conducting monthly oversight meetings with WEC/CB&I concerning this issue. WEC/CB&I has undertaken a comprehensive reevaluation of the engineering resources and schedule to support the project work which was underway at the close of the period (see Section I.C above).

**2. Site Specific Design Activities**

Site specific design work is ongoing in support of site specific systems, to include the Circulating Water System (CWS), Power Distribution Center (PDC), Construction and Offsite Power System (ZBS), Raw Water System (RWS), Offsite Water System (OWS), and Waste Water System (WWS).

**E. Training**

**1. Plant Reference Simulator (PRS).** The implementation schedule for the PRS continues to support the schedule for training and licensing the AP1000 reactor operators required for the initial fuel load for Unit 2. However, there is little margin for error in the current schedule. SCE&G continues to monitor progress in this area closely and to participate in schedule reviews, readiness assessments and testing and validation activities. Work continues in acceptance testing of the PRS as well as testing of the software and its integration with the design. SCE&G continues to work with other AP1000 owners and WEC/CB&I to identify ways to accelerate the timetable for being able to conduct full scope simulator testing. Given its importance to the project schedule, the validation and testing of the PRS will remain an area of focus.

**2. Initial Licensed Operator Training (ILO).** The ILO class of 24 students that began in 2012 has successfully completed training on the Limited Scope Simulator. The class is expected to take the NRC written exams and integrated operations simulator exams on the PRS in May 2015. A second class of 24 students began the ILO training in June 2013 and is scheduled to take the NRC written and simulator exams in November 2015. A third class of 18 students is scheduled to begin ILO training in September 2014 and to take the NRC written and simulator exams in September 2016.

**3. Senior Reactor Operator Certification Training (SROC).** An SROC class for training instructors and operations personnel began in July of 2013



with eight students all of whom successfully completed systems examinations during the period. This class is anticipated to be completed in the first quarter of 2014.

**4. Non-Licensed Operator Training (NLO).** A second NLO class of 19 students had completed their training at the close of the period.

**F. Operational Readiness**

**1. Mission Critical Hiring.** By the close of the period, SCE&G had completed hiring for 100% of the 2013 class of operational staffing positions that have been identified as mission critical.

**2. Programs and Procedures.** The preparation of operations, maintenance and technical training programs and procedures is proceeding as expected, and as of the end of the period, 2013 goals for producing these programs and procedures were met. SCE&G continues to negotiate with WEC/CB&I concerning the identity of the data and documentation that must be transferred to SCE&G.

**G. Change Control/Owners Cost Forecast**

**1. Change Order 16.** In Change Order 16, SCE&G and WEC/CB&I agreed to transition certain scopes of work from being escalated using Handy-Whitman indices to being escalated using fixed escalation rates. A dispute related to the methodology for accounting for prior escalation in this transition had prevented finalization of Change Order 16. During the period, SCE&G and WEC/CB&I reached an agreement which resolves this matter and which allows Change Order 16 to be finalized. This agreement will be documented in a new change order that will not involve any increase in the EPC Agreement price.

**2. Commercial Issues.** During the period, SCE&G and WEC/CB&I reached tentative agreements providing for a) additional equipment required to be installed in the OWS for the removal of bromide from raw water during treatment, and b) the transfer of certain CB&I start-up construction support Time & Material (T&M) scopes of work and associated dollars to the Target price category. These items will be included in the future change order that will also include the agreed upon escalation transition methodology referenced in Section II.G.1. above. This change order will not involve any increase in the EPC Agreement price.

**3. Cyber Security.** WEC/CB&I continues to prepare a counterproposal for the cyber security scope of work. SCE&G NND Engineering and WEC/CB&I

completed an effort to more clearly identify the cyber security technical scope of work.

**4. WEC Costs Related to the Implementation of the Health Care and Education Reconciliation Act of 2010 and Prior Health Care Acts (“Health Care Act”).** SCE&G continues to review information provided by WEC related to its increased costs of compliance with the Health Care Act. A change order to reflect these costs is anticipated.

## **H. Transmission**

**1. VCS1-Killian 230 kV Line.** Construction of the VCS1-Killian 230 kV Line was largely completed in the period. A small scope of work remains to be completed during the spring VCS1 refueling outage. The line can then be energized.

**2. VCS2-Lake Murray 230 kV Line No. 2 and Segment of the VCS2-St. George 230 kV Line No. 1.** During the period, construction of these lines was completed and the VCS2-Lake Murray 230 kV Line No. 2 was energized. SCE&G plans to energize the segment of the VCS2-St. George 230 kV Line No. 1 that was built as a part of this project when the remaining segment of that line is built and energized.

**3. The Remaining Segment of VCS2-St. George 230 kV Line No. 1 and the VCS2-St. George 230 kV Line No. 2.** Preliminary construction activities for these lines continued during the period including installation of erosion control measures, spotting and framing of structures, and installation of foundations. To maintain system reliability, the work on VCS2-St. George 230 kV Line No. 2 requires the VCS2-Lake Murray 230 kV Line No. 2 to be energized so that an existing line that will be rebuilt on common structures with the new line can be taken out of service. Completion of the VCS2-Lake Murray 230 kV Line No. 2 allowed this existing line to be dismantled during the period.

**4. St. George Switching Station.** The overall engineering layout of the station was complete in prior periods and the site plan and storm-water permit application were being developed.

**5. Saluda River Substation.** During the fourth quarter of 2013, the substation site was cleared and further site preparations were being planned in anticipation of receipt of the storm-water permit and the U.S. Army Corps of Engineers Nationwide Permit #12 in early 2014.

## **III. Anticipated Construction Schedules**

As of December 31, 2013, the Company and its contractors remain on schedule to complete all required milestones as adjusted pursuant to the milestone schedule contingencies approved by the Commission in Order No. 2009-104(A). Each of those adjustments is itemized in the BLRA Milestone section that follows. Accordingly, the project is in compliance with the updated construction schedules approved by the Commission in Order No. 2012-884 and with the provisions of S.C. Code Ann. § 58-33-275(A)(1).

#### **A. Construction Schedule**

The Project Licensing and Permitting, Engineering, Procurement and Construction work remains on schedule to meet the Units' Substantial Completion Dates taking into account the schedule contingencies approved in Order 2009-104(A).

#### **B. BLRA Milestones**

**Appendix 1** to this quarterly report lists and updates each of the specific milestones constituting the anticipated construction schedules for the Units pursuant to S.C. Code Ann. § 58-33-270(B)(1) and Order No. 2012-884. Comparing the current milestone target completion dates to the dates in Order No. 2012-884, 2 milestones have been accelerated and 45 have been delayed.

### **IV. Schedules of the Capital Costs Incurred Including Updates to the Information Required by S.C. Code Ann. § 58-33-270(B) (6) (the Inflation Indices)**

The Capital Costs section of this report (Section IV.A) provides an update of the cumulative capital costs incurred and forecasted to be incurred in completing the project. These costs are compared to the cumulative capital cost targets approved by the Commission in Order No. 2012-884. The approved capital cost targets have been adjusted to reflect the currently reported historical escalation rates. There has not been any use by the Company of the capital cost timing contingencies that were approved by the Commission in Order No. 2009-104(A). The Inflation Indices section (Section IV.B) of this report provides updated information on inflation indices and the changes in them.

#### **A. Capital Costs**

**Appendix 2** shows the Cumulative Project Cash Flow target as approved in Order No. 2012-884 and as updated for escalation and other Commission-approved adjustments under the heading **"Per Order 2012-884 Adjusted."**

**Appendix 2** also shows the cumulative cash flow for the project based on actual expenditures to date and the Company's current forecast of cost and construction schedules under the heading **"Actual through December 2013 plus Projected."**

As shown on **Appendix 2**, the expenditure for the project for the 12 months ended December 31, 2013, is approximately \$538 million. As shown on **Appendix 2**, line 39, the cumulative amount spent on the project as of December 31, 2013, is approximately \$2.311 billion. As shown on **Appendix 2**, line 18, the Cumulative Project Cash Flow target approved by the Commission for year-end 2013 adjusted for current escalation and WEC/CB&I billing differences is approximately \$2.843 billion. As a result, the cumulative cash flow at year-end 2013 is projected to be approximately \$532.0 million less than the target.

For comparison purposes, **Appendix 3** sets out the cash flow schedule for the project as it was approved in Order No. 2012-884. **Appendix 3** does not include any adjustments to the cash flow schedule for changes in inflation indices or adjustments in capital cost schedules made by the Company. The AFUDC forecast presented on **Appendix 3** is the AFUDC forecast that was current at the time of Order No. 2012-884.

## **B. Inflation Indices**

**Appendix 4** shows the updated inflation indices approved in Order No. 2009-104(A). Included is a history of the annual Handy-Whitman All Steam Index, South Atlantic Region; the Handy-Whitman All Steam and Nuclear Index, South Atlantic Region; the Handy-Whitman All Transmission Plant Index, South Atlantic Region; and the Chained GDP Index for the past 10 years. The changes in these indices and the escalation-related effects of cost rescheduling resulted in a decrease in the projected cost of the Units in future dollars from approximately \$6.3 billion as forecast in Order No. 2009-104(A) to a forecast of approximately \$5.7 billion using current inflation data.

## **V. Updated Schedule of Anticipated Capital Costs**

The updated schedule of anticipated capital costs for Units 2 & 3 is reflected in **Appendix 2**.

## **VI. Conclusion**

The Units are currently anticipated to be completed at a cost of approximately \$4.5 billion in 2007 dollars. The Company maintains a staff that monitors the work of its contractors and continues to monitor closely areas of concern related to either the cost or schedule for the project. The Company will continue to update the Commission and the ORS of progress and concerns as the project proceeds.

**ATTACHMENT 1****GLOSSARY OF ACRONYMS OR DEFINED TERMS**

Acronym or Defined Term	Reference
7Q10	A standard low-water flow condition used for evaluating the environmental effects of discharges and withdrawals from rivers and streams. The conditions are calculated to reflect the lowest average 7-day flow expected to be encountered during any 10-year period.
ACI	American Concrete Institute.
AFUDC	Allowance for Funds Used During Construction.
AP1000	The WEC designed Advanced Pressurized water nuclear reactor of approximately 1000 megawatts generating capacity.
APOG	A group of utilities who have submitted applications for AP1000 COLs.
BLRA	The Base Load Review Act, S.C. Code Ann. § 58-33-210 et seq. (Supp. 2009).
CA	The designation for specific pre-fabricated structural modules that form part of the reactor building or auxiliary building, such as Module CA20.
CAP	Corrective Action Program.
CAR	A Corrective Action Report related to design, engineering or construction of the Units, or related processes, that must be corrected.
CB&I	Chicago Bridge & Iron, a sub-contractor on the project which, upon acquisition of the Shaw Group, became a member of the Consortium and a prime contractor on the project.
CB&I-LC	CB&I Lake Charles - the module fabrication unit formerly known as Shaw Modular Solutions or SMS and located in Lake Charles, Louisiana.
CB&I Services	A subsidiary of CB&I that is fabricating the containment vessels onsite under contract with Westinghouse.
CES	Carolina Energy Solutions, a subcontractor located in Rock Hill, South Carolina.
CMIS	Configuration Management Information System.
COLs	Combined Operating Licenses for construction and operation of a nuclear unit issued by the NRC.
COLA	A Combined Operating License Application.
Commission	The Public Service Commission of South Carolina.
Consortium	The joint venture between WEC Electric Company, LLC and CB&I to construct the Units under the terms of the EPC Contract.
CR	A Condition Report communicating and memorializing concerns with the design, engineering or construction of the Units, or related processes, which in some cases can become the basis for a Corrective Action Report.
CV	The Containment Vessel which provides containment for the reactor vessel and associated equipment.
CVBH	The Containment Vessel Bottom Head that forms the bottom of the Containment Vessel.
CWIP	Construction Work in Progress.
CWP	Circulating Water Pipe.
CWS	The Circulating Water System –the system that will transport waste heat from the turbines to the cooling towers.
Cyber Security	Technologies, processes and practices designed to protect networks, computers, programs and data from attack, damage or unauthorized access.

**ATTACHMENT 1****GLOSSARY OF ACRONYMS OR DEFINED TERMS**

Acronym or Defined Term	Reference
DCD	Design Control Document which is approved by the Nuclear Regulatory Commission and sets forth the approved design of a nuclear reactor.
Departures	Departures are minor deviations from the approved Design Control Document included in the licensing basis for the Units that do not rise to the level requiring a LAR.
EMD	Electro-Mechanical Division of Curtiss-Wright Corp., the sub-contractor for the Reactor Coolant Pumps.
EPA	The United States Environmental Protection Agency.
EPC Contract	The Engineering, Procurement and Construction Agreement for construction of the Units entered into by SCE&G and WEC/CB&I.
ERB	The Emergency Response Building which provides office space and housing for the emergency response personnel and equipment for all three units.
Exit Debriefing	A meeting held between the NRC and the licensee at the conclusion of an NRC inspection to discuss the results of the inspection.
FEIS	A Final Environmental Impact Statement as required by the National Environmental Policy Act of 1969.
FERC	The Federal Energy Regulatory Commission.
FFD	Fitness For Duty, a program that seeks to provide reasonable assurance that site personnel are trustworthy, will perform their tasks in a reliable manner, and are not under the influence of substances or otherwise impaired in a way that may adversely affect their ability to safely and competently perform their duties.
Fixed/Firm	Prices under the EPC Contract which are either fixed or are firm but subject to defined escalation rates.
FLEX	A diverse, flexible strategy led by NEI for adding more backup systems to cool nuclear reactors and used fuel storage pools and to maintain the integrity of reactor containment structures in response to lessons learned from Fukushima.
FNC	First Nuclear Concrete.
FNTP	Full Notice to Proceed authorizing all remaining safety-related work to commence.
FSAR	Final Safety Analysis Report – a report by the applicant providing support to the NRC's approval and certification of the standard power plant design.
GDP	Gross Domestic Product.
HFE/ISV	Human Factors Engineering/Integrated Systems Validation –part of the development of a training simulator for the Units.
HL or Hot Leg	That part of the Reactor Cooling Loop that transports steam to the steam generators.
HLD	Heavy Lift Derrick - the derrick that was erected on site to move large modules and equipment.
IBF	Subcontractor of Tioga that manufactures the Reactor Coolant Loop piping.
ICN	ITAAC Closure Notification – the letter from the licensee to notify the NRC that an ITAAC is complete in accordance with 10 CFR 52.99(c)(1).
IFC	Issued for Construction – engineering drawings that include information necessary for construction of specific structures, systems and components.
ILO	Initial Licensed Operator.
INPO	Institute of Nuclear Power Operations.
IPS	Integrated Project Schedule for licensing and construction of the Units.

**ATTACHMENT 1****GLOSSARY OF ACRONYMS OR DEFINED TERMS**

Acronym or Defined Term	Reference
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria which are the inspections, tests, analyses and acceptance criteria that the NRC has determined to be necessary and sufficient to demonstrate that a nuclear unit has been constructed and will operate in conformity with the COLs, the Atomic Energy Act of 1954, as amended, and the NRC's regulations.
LAR	License Amendment Request – A formal request made by VCSNS to amend the combined operating license, its appendices, or its associated bases.
LNTF	Limited Notice to Proceed authorizing a vendor to commence specific work.
LSS	Limited Scope Simulator – a training simulator with limited functionality that can be used for the initial stages of operator training.
MAB	Module Assembly Building - a building on site where large modules will be constructed and equipment will be prepared for installation in a space that is protected from the elements.
Mangiarotti	Mangiarotti Nuclear, S.p.A.
Near Term Task Force	A senior level task force created by the NRC to address lessons learned from the 2011 earthquake and tsunami in Fukushima, Japan with operating nuclear plants and new reactor applicants.
NEI	Nuclear Energy Institute.
Nelson Studs	Metal studs used in composite construction to secure concrete to steel components. The studs project out of the steel components and are surrounded by the concrete when it is poured.
NI	Nuclear Island, comprising the steel containment vessel, the reactor building, and the auxiliary building.
NLC	Nuclear Learning Center - a training facility operated by SCE&G at the Jenkinsville site.
NLO	Non-Licensed Operator.
NND	The New Nuclear Deployment Team within SCE&G.
NNI	Newport News Industries - a module fabrication subcontractor to WEC/CB&I.
NPDES	National Pollutant Discharge Elimination System.
NRC	The United States Nuclear Regulatory Commission.
ORS	South Carolina Office of Regulatory Staff.
OVS	Off Site Water System – the system that withdraws water from Monticello Reservoir and provides potable and filtered water for the Units.
PAR	Preliminary Amendment Request - A formal request made by VCSNS which allows VCSNS to proceed at its own risk with work consistent with an amendment request contained in an LAR prior to approval.
PDC	Power Distribution Center - prefabricated, modular enclosures housing electrical equipment such as switchgear, motor control center equipment and other auxiliary equipment.
Pike	Pike Energy Solutions, a contractor for transmission and switchyard related work.
PRA	Probabilistic Risk Assessment.
PRHR	The Passive Residual Heat Removal Exchanger unit – a heat exchanger unit that is part of the passive safety system which provides cooling to the AP1000 reactor during emergency situations.

**ATTACHMENT 1****GLOSSARY OF ACRONYMS OR DEFINED TERMS**

Acronym or Defined Term	Reference
PRS	Plant Reference Simulator – a training simulator with full functionality that can be used in all stages of operator training.
PWS	The Potable Water System - which provides potable water to the site.
QA	Quality Assurance – The planned and systematic activities implemented in a quality system so that the quality requirements for a product or service will be fulfilled.
QA/QC	Quality Assurance/Quality Control.
QC	Quality Control – The observation techniques and activities used to fulfill requirements for quality.
RAI	Requests for Additional Information issued by the NRC staff to license applicants.
RCA	Root Cause Analysis – identification and evaluation of the reason for non-conformance, an undesirable condition, or a problem which (when solved) restores the status quo.
RCL	The Reactor Coolant Loop – the piping and related equipment that transports heat from the reactor to the steam generator.
RCP	The Reactor Cooling Pump which forms part of the Reactor Coolant System.
RCS	The Reactor Coolant System - the complete system for transferring and transporting heat from the reactor to the steam generator.
RFI	Requests for Information issued by the NRC staff to licensees.
ROW	Right-of-way.
RT	Radiographic Testing - a nondestructive testing method of inspecting materials for hidden flaws by using the ability of short wavelength electromagnetic radiation (high energy photons) to penetrate various materials.
RV	Reactor Vessel.
RWS	Raw Water System – the system for withdrawing and transporting raw water from the Monticello Reservoir.
SAT	Site Acceptance Testing.
SCDHEC	The South Carolina Department of Health and Environmental Control.
SCDNR	The South Carolina Department of Natural Resources.
SCE&G or The Company	South Carolina Electric & Gas Company.
SDS	Sanitary Drain System.
Shaw	The Shaw Group.
SMS	Shaw Modular Solutions, LLC.
SNC	Southern Nuclear Company – a subsidiary of Southern Company and licensed operator of the Vogtle Nuclear Units and two other nuclear plants.
SRO	Senior Reactor Operator.
SROC	Senior Reactor Operator Certification.
Target	Costs under the EPC Contract where targets have been established but where SCE&G pays actual costs as incurred.
TEi	Thermal Engineering International – a subsidiary of Babcock Power which manufactures moisture separator reheaters and other power plant equipment.
UFSAR	Updated Final Safety Analysis Report.
Units	V. C. Summer Nuclear Station Units 2 & 3.
Update Docket	A proceeding under the BLRA seeking Commission approval of updated cost and construction schedules for the Units.



**ATTACHMENT 1****GLOSSARY OF ACRONYMS OR DEFINED TERMS**

Acronym or Defined Term	Reference
URI	Unresolved Items – A term used by the NRC during inspections for items that require further action.
USACOE	The United States Army Corps of Engineers.
VCSNS or VCSN	V. C. Summer Nuclear Station.
WEC	Westinghouse Electric Company, LLC.
WEC/CB&I	The consortium formed by Westinghouse Electric Company, LLC and CB&I.
WEC/CB&I Claims	WEC/CB&I's claims for additional charges associated with the COL delay, the Shield Building design changes, the structural modules design changes, and the lower than anticipated rock elevations encountered in certain areas within the Unit 2 Nuclear Island.
WTP	The Off-Site Water Treatment Plant which will take water from Lake Monticello and treat it to potable water standards.
WWS	The Waste Water System – the system for collection, treatment and disposal of domestic waste water generated on site.
YFS	The Yard Fire System – the system that provides fire detection and protection outside of the plant.
ZBS	The Construction and Offsite Power System –the system which provides electrical power to the site.

## **APPENDIX 1**

### **V. C. Summer Nuclear Station Units 2 & 3**

**Quarterly Report to the South Carolina Office of Regulatory Staff  
Submitted by South Carolina Electric & Gas Company  
Pursuant to Public Service Commission Order No. 2009-104(A)**

#### **Quarter Ending December 31, 2013**




**Appendix 1** lists and updates each of the milestones which the Commission adopted as the Approved Construction Schedule for the Units, pursuant to S.C. Code Ann. § 58-33-270(B)(1) in Order No. 2012-884. **Appendix 1** provides columns with the following information:

1. Milestone tracking ID number.
2. The description of the milestone as updated in Order No. 2012-884.
3. The BLRA milestone date as approved by the Commission in Order No. 2012-884.
4. The current milestone date.
5. For each completed milestone, the date by which it was completed. For milestones completed prior to the current reporting quarter, the milestone entry is shaded in gray. For milestones completed during the current reporting quarter, the milestone entry is shaded in green.
6. Information showing the number of months, if any, by which a milestone has been shifted. For milestones with planned completion dates that vary in days instead of months, the milestone entry is shaded in yellow.
7. Information as to whether any milestone has been shifted outside of the +18/-24 Month Contingency approved by the Commission.
8. Notes.

On the final page of the document, there is a chart summarizing milestone completion and movement comparing the current milestone date to the milestone date approved in Order No. 2012-884. This movement is shown for only the milestones that have not been completed.

**Appendix 1**  
**VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
1	Approve Engineering Procurement and Construction Agreement	Complete		5/23/2008		No	
2	Issue POs to nuclear component fabricators for Units 2 & 3 Containment Vessels	Complete		12/3/2008		No	
3	Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator - First Payment - Unit 2	Complete		8/18/2008		No	
4	Contractor issue PO to Accumulator Tank Fabricator - Unit 2	Complete		7/31/2008		No	
5	Contractor Issue PO to Core Makeup Tank Fabricator - Units 2 & 3	Complete		9/30/2008		No	
6	Contractor Issue PO to Squib Valve Fabricator - Units 2 & 3	Complete		3/31/2009		No	
7	Contractor Issue PO to Steam Generator Fabricator - Units 2 & 3	Complete		5/29/2008		No	
8	Contractor Issue Long Lead Material PO to Reactor Coolant Pump Fabricator - Units 2 & 3	Complete		6/30/2008		No	
9	Contractor Issue PO to Pressurizer Fabricator - Units 2 & 3	Complete		8/18/2008		No	
10	Contractor Issue PO to Reactor Coolant Loop Pipe Fabricator - First Payment - Units 2 & 3	Complete		6/20/2008		No	
11	Reactor Vessel Internals - Issue Long Lead Material PO to Fabricator - Units 2 & 3	Complete		11/21/2008		No	
12	Contractor issue Long Lead Material PO to Reactor Vessel Fabricator - Units 2 & 3	Complete		5/29/2008		No	
13	Contractor Issue PO to Integrated Head Package Fabricator - Units 2 & 3	Complete		7/31/2009		No	
14	Control Rod Drive Mechanism Issue PO for Long Lead Material to Fabricator - Units 2 & 3 - first payment	Complete		6/21/2008		No	

Legend  = Completed  = Completed this Quarter  = Movement in Days Only



13-4Q

PUBLIC VERSION

**Appendix 1  
VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
15	Issue POs to nuclear component fabricators for Nuclear Island structural CA20 Modules	Complete		8/28/2009		No	
16	Start Site Specific and balance of plant detailed design	Complete		9/11/2007		No	
17	Instrumentation & Control Simulator - Contractor Place Notice to Proceed - Units 2 & 3	Complete		10/31/2008		No	
18	Steam Generator - Issue Final PO to Fabricator for Units 2 & 3	Complete		6/30/2008		No	
19	Reactor Vessel Internals - Contractor Issue PO for Long Lead Material (Heavy Plate and Heavy Forgings) to Fabricator - Units 2 & 3	Complete		1/29/2010		No	
20	Contractor Issue Final PO to Reactor Vessel Fabricator - Units 2 & 3	Complete		9/30/2008		No	
21	Variable Frequency Drive Fabricator Issue Transformer PO - Units 2 & 3	Complete		4/30/2009		No	
22	Start clearing, grubbing and grading	Complete		1/26/2009		No	
23	Core Makeup Tank Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/31/2008		No	
24	Accumulator Tank Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/31/2008		No	
25	Pressurizer Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/31/2008		No	
26	Reactor Coolant Loop Pipe - Contractor Issue PO to Fabricator - Second Payment - Units 2 & 3	Complete		4/30/2009		No	
27	Integrated Head Package - Issue PO to Fabricator - Units 2 and 3 - second payment	Complete		7/31/2009		No	
28	Control Rod Drive Mechanisms - Contractor Issue PO for Long Lead Material to Fabricator - Units 2 & 3	Complete		6/30/2008		No	

Legend  = Completed  = Completed this Quarter  = Movement in Days Only

South Carolina Electric &amp; Gas Company



13-4Q

PUBLIC VERSION

**Appendix 1  
VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
29	Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator - Second Payment - Units 2 & 3	Complete		10/31/2008		No	
30	Start Parr Road intersection work	Complete		2/13/2009		No	
31	Reactor Coolant Pump - Issue Final PO to Fabricator - Units 2 & 3	Complete		6/30/2008		No	
32	Integrated Heat Packages Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/1/2009		No	
33	Design Finalization Payment 3	Complete		1/30/2009		No	
34	Start site development	Complete		6/23/2008		No	
35	Contractor Issue PO to Turbine Generator Fabricator - Units 2 & 3	Complete		2/19/2009		No	
36	Contractor issue PO to Main Transformers Fabricator - Units 2 & 3	Complete		9/25/2009		No	
37	Core Makeup Tank Fabricator Notice to Contractor Receipt of Long Lead Material - Units 2 & 3	Complete		12/30/2010		No	
38	Design Finalization Payment 4	Complete		4/30/2009		No	
39	Turbine Generator Fabricator Issue PO for Condenser Material - Unit 2	Complete		8/28/2009		No	
40	Reactor Coolant Pump Fabricator Issue Long Lead Material Lot 2 - Units 2 & 3	Complete		4/30/2009		No	
41	Passive Residual Heat Removal Heat Exchanger Fabricator Receipt of Long Lead Material - Units 2 & 3	Complete		5/27/2010		No	
42	Design Finalization Payment 5	Complete		7/31/2009		No	

Legend  = Completed  = Completed this Quarter  = Movement in Days Only

South Carolina Electric &amp; Gas Company



**Appendix 1  
VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
43	Start erection of construction buildings, to include craft facilities for personnel, tools, equipment; first aid facilities; field offices for site management and support personnel; temporary warehouses; and construction hiring office	Complete		12/18/2009		No	
44	Reactor Vessel Fabricator Notice to Contractor of Receipt of Flange Nozzle Shell Forging - Unit 2	Complete		8/28/2009		No	
45	Design Finalization Payment 6	Complete		10/7/2009		No	
46	Instrumentation and Control Simulator - Contractor Issue PO to Subcontractor for Radiation Monitor System - Units 2 & 3	Complete		12/17/2009		No	
47	Reactor Vessel Internals - Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	Complete		7/29/2011		No	
48	Turbine Generator Fabricator Issue PO for Moisture Separator Reheater/Feedwater Heater Material - Unit 2	Complete		4/30/2010		No	
49	Reactor Coolant Loop Pipe Fabricator Acceptance of Raw Material - Unit 2	Complete		2/18/2010		No	
50	Reactor Vessel Internals - Fabricator Start Weld Neutron Shield Spacer Pads to Assembly - Unit 2	Complete		8/28/2012		No	
51	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 2	Complete		6/30/2009		No	
52	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 2	Complete		12/23/2010		No	
53	Start excavation and foundation work for the standard plant for Unit 2	Complete		3/15/2010		No	
54	Steam Generator Fabricator Notice to Contractor of Receipt of 2nd Steam Generator Tubesheet Forging - Unit 2	Complete		4/30/2010		No	

Legend  = Completed  = Completed this Quarter  = Movement in Days Only



**Appendix 1**  
**VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
55	Reactor Vessel Fabricator Notice to Contractor of Outlet Nozzle Welding to Flange Nozzle Shell Completion - Unit 2	Complete		12/30/2010		No	
56	Turbine Generator Fabricator Notice to Contractor Condenser Fabrication Started - Unit 2	Complete		5/17/2010		No	
57	Complete preparations for receiving the first module on site for Unit 2	Complete		1/22/2010		No	
58	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Transition Cone Forging - Unit 2	Complete		4/21/2010		No	
59	Reactor Coolant Pump Fabricator Notice to Contractor of Manufacturing of Casing Completion - Unit 2	Complete		11/16/2010		No	
60	Reactor Coolant Loop Pipe Fabricator Notice to Contractor of Machining, Heat Treating & Non-Destructive Testing Completion - Unit 2	Complete		3/20/2012		No	
61	Core Makeup Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 2	Complete		11/26/2012		No	
62	Polar Crane Fabricator Issue PO for Main Hoist Drum and Wire Rope - Units 2 & 3	Complete		2/1/2011		No	
63	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 3	Complete		6/14/2011		No	
64	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 2	Complete		3/26/2012		No	
65	Start placement of mud mat for Unit 2	Complete		7/20/2012		No	
66	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Tubing - Unit 2	Complete		9/28/2010		No	

Legend  = Completed  = Completed this Quarter  = Movement in Days Only



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PUBLIC VERSION

**Appendix 1  
VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
67	Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2	Complete		10/28/2011		No	
68	Reactor Vessel Fabricator Notice to Contractor of Closure Head Cladding Completion - Unit 3	Complete		6/28/2012		No	
69	Begin Unit 2 first nuclear concrete placement	Complete		3/9/2013		No	
70	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 2	Complete		12/1/2011		No	
71	Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	Complete		7/29/2011		No	
72	Steam Generator Fabricator Notice to Contractor of Completion of 1st Steam Generator Tubing Installation - Unit 2	Complete		1/27/2012		No	
73	Reactor Coolant Loop Pipe - Shipment of Equipment to Site - Unit 2	12/31/2012		12/19/2013		No	
74	Control Rod Drive Mechanism - Ship Remainder of Equipment (Latch Assembly & Rod Travel Housing) to Head Supplier - Unit 2	Complete		7/16/2012		No	
75	Pressurizer Fabricator Notice to Contractor of Welding of Lower Shell to Bottom Head Completion - Unit 2	Complete		12/22/2011		No	
76	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 2	Complete		5/4/2012		No	
77	Design Finalization Payment 14	Complete		10/31/2011		No	
78	Set module CA04 for Unit 2	11/6/2012	2/28/2014		+15 Month(s)	No	Delay due to First Nuclear Concrete (FNC) delay and fabrication delay for CA04.

Legend  = Completed  = Completed this Quarter  = Movement in Days Only

South Carolina Electric &amp; Gas Company



**Appendix 1**  
**VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
79	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Final Post Weld Heat Treatment - Unit 2	Complete		5/24/2011		No	
80	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Completion of Tubing - Unit 2	Complete		5/29/2012		No	
81	Polar Crane Fabricator Notice to Contractor of Girder Fabrication Completion - Unit 2	Complete		10/23/2012		No	
82	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 3	Complete		8/26/2013		No	
83	Set Containment Vessel ring #1 for Unit 2	1/7/2013	3/7/2014		+14 Month(s)	No	Due to delays associated with delivery, receipt and fabrication of modules.
84	Reactor Coolant Pump Fabricator Delivery of Casings to Port of Export - Unit 2	Complete		7/6/2013		No	
85	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 3	Complete		7/18/2013		No	
86	Reactor Vessel Fabricator Notice to Contractor of Receipt of Core Shell Forging - Unit 3	Complete		3/29/2012		No	
87	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 3	Complete		11/9/2011		No	
88	Set Nuclear Island structural module CA03 for Unit 2	6/26/2013	10/31/2014		+16 Month(s)	No	Due to delays associated with delivery, receipt and fabrication of the CA01 module.
89	Squib Valve Fabricator Notice to Contractor of Completion of Assembly and Test for Squib Valve Hardware - Unit 2	Complete		5/10/2012		No	
90	Accumulator Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	Complete		9/16/2013		No	

Legend  = Completed  = Completed this Quarter  = Movement in Days Only

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PUBLIC VERSION

**Appendix 1**  
**VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
91	Polar Crane Fabricator Notice to Contractor of Electric Panel Assembly Completion - Unit 2	Complete		3/6/2013		No	
92	Start containment large bore pipe supports for Unit 2	6/28/2013	10/13/2014		+16 Month(s)	No	Due to delays associated with delivery, receipt and fabrication of modules.
93	Integrated Head Package - Shipment of Equipment to Site - Unit 2	3/31/2013	2/1/2014		+11 Month(s)	No	Due to design changes and subsequent delays in predecessor schedule activities.
94	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 2	5/31/2013		12/17/2013		No	
95	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 3	6/30/2013	1/31/2014		+7 Month(s)	No	Due to schedule refinement and review.
96	Steam Generator Fabricator Notice to Contractor of Satisfactory Completion of 1st Steam Generator Hydrotest - Unit 2	Complete		1/14/2013		No	
97	Start concrete fill of Nuclear Island structural modules CA01 and CA02 for Unit 2	4/3/2014	4/18/2015		+12 Month(s)	No	Due to delays associated with fabrication and setting of the CA01 module.
98	Passive Residual Heat Removal Heat Exchanger - Delivery of Equipment to Port of Entry - Unit 2	12/31/2012	3/30/2014		+15 Month(s)	No	Due to schedule refinement and required engineering design approval prior to shipment.
99	Refueling Machine Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 2	11/30/2013	3/19/2014		+4 Month(s)	No	Due to schedule refinement and review.
100	Deliver Reactor Vessel Internals to Port of Export - Unit 2	1/31/2014	11/14/2014		+10 Month(s)	No	Due to schedule refinement and review.

Legend  = Completed  = Completed this Quarter  = Movement in Days Only

South Carolina Electric &amp; Gas Company






**Appendix 1**  
**VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
101	Set Unit 2 Containment Vessel #3	4/24/2014	6/18/2015		+14 Month(s)	No	Due to delays associated with fabrication and setting of the CA01 module.
102	Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 2	7/31/2013	7/25/2014		+12 Month(s)	No	Due to schedule refinement and review.
103	Turbine Generator Fabricator Notice to Contractor Turbine Generator Ready to Ship - Unit 2	Complete		5/28/2013		No	
104	Pressurizer Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	3/31/2014	3/28/2014			No	Due to schedule refinement and review.
105	Polar Crane - Shipment of Equipment to Site - Unit 2	1/31/2014	2/6/2015		+13 Month(s)	No	Due to schedule refinement and resequencing.
106	Receive Unit 2 Reactor Vessel on site from fabricator	Complete		7/31/2013		No	
107	Set Unit 2 Reactor Vessel	6/23/2014	4/28/2015		+10 Month(s)	No	Due to delays associated with delivery, receipt and fabrication of the CA01 module.
108	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Channel Head to Tubesheet Assembly Welding - Unit 3	12/31/2013	6/30/2014		+6 Month(s)	No	Due to schedule refinement and review.
109	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 3	8/31/2014	2/27/2015		+6 Month(s)	No	Due to schedule refinement and review.
110	Reactor Coolant Pump - Shipment of Equipment to Site (2 Reactor Coolant Pumps) - Unit 2	10/31/2013	6/13/2014		+8 Month(s)	No	Due to schedule refinement and review.
111	Place first nuclear concrete for Unit 3	10/9/2013		11/2/2013		No	
112	Set Unit 2 Steam Generator	10/23/2014	7/29/2015		+9 Month(s)	No	Due to delays associated with fabrication and setting of the CA01 module.

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**Appendix 1**  
**VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
113	Main Transformers Ready to Ship - Unit 2	Complete		7/31/2013		No	
114	Complete Unit 3 Steam Generator Hydrotest at fabricator	2/28/2014	10/30/2014		+8 Month(s)	No	Due to schedule refinement and review.
115	Set Unit 2 Containment Vessel Bottom Head on basemat legs	Complete		5/22/2013		No	
116	Set Unit 2 Pressurizer Vessel	5/16/2014	5/8/2015		+12 Month(s)	No	Due to delays associated with fabrication and setting of the CA01 module.
117	Reactor Coolant Pump Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 3	2/28/2015	4/30/2015		+2 Month(s)	No	Due to schedule refinement and review.
118	Deliver Reactor Vessel Internals to Port of Export - Unit 3	6/30/2015	10/30/2015		+4 Month(s)	No	Due to schedule refinement and review.
119	Main Transformers Fabricator Issue PO for Material - Unit 3	2/28/2015	2/2/2015			No	Due to schedule refinement and review.
120	Complete welding of Unit 2 Passive Residual Heat Removal System piping	2/5/2015	10/10/2015		+8 Month(s)	No	Due to delays associated with fabrication and setting of the CA01 module.
121	Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 3	4/30/2015	1/1/2015		-3 Month(s)	No	Schedule ahead of plan.
122	Refueling Machine - Shipment of Equipment to Site - Unit 3	2/28/2015	4/3/2015		+2 Month(s)	No	Due to schedule refinement and review.
123	Set Unit 2 Polar Crane	1/9/2015	9/22/2015		+8 Month(s)	No	Due to delays associated with fabrication and setting of the CA01 module.
124	Reactor Coolant Pumps - Shipment of Equipment to Site - Unit 3	6/30/2015	6/5/2015			No	Due to schedule refinement and review.

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**Appendix 1**  
**VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
125	Main Transformers Ready to Ship - Unit 3	7/31/2015	5/31/2015		-2 Month(s)	No	Schedule ahead of plan.
126	Spent Fuel Storage Rack - Shipment of Last Rack Module - Unit 3	7/31/2014	7/3/2014			No	Due to schedule refinement and review.
127	Start electrical cable pulling in Unit 2 Auxiliary Building	8/14/2013	11/11/2014		+15 Month(s)	No	Due to delays associated with engineering and licensing approvals and delay of FNC.
128	Complete Unit 2 Reactor Coolant System cold hydro	1/22/2016	10/24/2016		+9 Month(s)	No	Delay associated with delivery, receipt and fabrication of module CA01.
129	Activate class 1E DC power in Unit 2 Auxiliary Building	3/15/2015	2/5/2016		+11 Month(s)	No	Due to delays associated with engineering and licensing approvals and delay of FNC.
130	Complete Unit 2 hot functional test	5/3/2016	2/28/2017		+9 Month(s)	No	Delay associated with delivery, receipt and fabrication of module CA01.
131	Install Unit 3 ring 3 for containment vessel	8/25/2015	1/20/2016		+5 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
132	Load Unit 2 nuclear fuel	9/15/2016	7/25/2017		+10 Month(s)	No	Delay associated with delivery, receipt and fabrication of module CA01.
133	Unit 2 Substantial Completion	3/15/2017	12/15/2017		+9 Month(s)	No	Delay associated with delivery, receipt and fabrication of module CA01.

Legend  = Completed  = Completed this Quarter  = Movement in Days Only

13-4Q

PUBLIC VERSION

**Appendix 1  
VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
134	Set Unit 3 Reactor Vessel	10/22/2015	2/20/2016		+4 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
135	Set Unit 3 Steam Generator #2	2/25/2016	6/7/2016		+4 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
136	Set Unit 3 Pressurizer Vessel	7/16/2015	2/22/2016		+7 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
137	Complete welding of Unit 3 Passive Residual Heat Removal System piping	6/16/2016	8/12/2016		+2 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
138	Set Unit 3 polar crane	5/9/2016	7/27/2016		+2 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
139	Start Unit 3 Shield Building roof slab rebar placement	5/26/2016	10/10/2016		+5 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.

Legend  = Completed  = Completed this Quarter  = Movement in Days Only

South Carolina Electric &amp; Gas Company



**Appendix 1**  
**VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
140	Start Unit 3 Auxiliary Building electrical cable pulling	11/7/2014	9/4/2015		+10 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
141	Activate Unit 3 Auxiliary Building class 1E DC power	5/15/2016	11/25/2016		+6 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
142	Complete Unit 3 Reactor Coolant System cold hydro	3/22/2017	8/31/2017		+5 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
143	Complete Unit 3 hot functional test	7/3/2017	1/4/2018		+6 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
144	Complete Unit 3 nuclear fuel load	11/15/2017	6/20/2018		+7 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
145	Begin Unit 3 full power operation	4/8/2018	11/25/2018		+7 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.

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13-4Q

PUBLIC VERSION

**Appendix 1  
VC Summer Units 2 and 3**

Tracking ID	Order No. 2012-884 Description	Order No. 2012-884 Date	13-4Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2012-884 Date	Outside +18/-24 Months Contingency?	Notes
146	Unit 3 Substantial Completion	5/15/2018	12/15/2018		+7 Month(s)	No	Delay due to rescheduling of Unit 3 work impacted by delay associated with delivery, receipt, and fabrication of module CA01.
<b>SUMMARY</b>							
Total Milestones Completed			95	out of	146 =	65%	
Milestone Movement - Order No. 2012-884 vs. 13-4Q:							
a) Forward Movement			45	out of	146 =	31%	
b) Backward Movement			2	out of	146 =	1%	
Milestones Within +12 to +17 Month range			11	out of	146 =	8%	

South Carolina Electric &amp; Gas Company

Legend  = Completed  = Completed this Quarter  = Movement in Days Only



## **APPENDIX 2**

### **V. C. Summer Nuclear Station Units 2 & 3**

**Quarterly Report to the South Carolina Office of Regulatory Staff  
Submitted by South Carolina Electric & Gas Company  
Pursuant to Public Service Commission Order No. 2009-104(A)**

#### **Quarter Ending December 31, 2013**

**Appendix 2** is an updated and expanded version of the information contained in the capital cost schedule approved by the Commission in Order No. 2012-884.

**Appendix 2** shows:

1. The actual expenditures on the project by plant cost category through the current period.
2. The changes in capital costs reflecting the Company's current forecast of expenditures on the project for each future period by plant cost category. In updating its cost projections the Company has used the current construction schedule for the project and the Commission-approved inflation indices as set forth in **Appendix 4** to this report.
3. The cumulative CWIP for the project and the balance of CWIP that is not yet reflected in revised rates.
4. The current rate for calculating AFUDC computed as required under applicable FERC regulations.

The Cumulative Project Cash Flow target as approved in Order No. 2012-884 and as updated for escalation and other Commission-approved adjustments is found under the heading "**Per Order 2012-884 Adjusted.**" The adjustments reflect:

1. Changes in inflation indices.
2. Budget Carry-Forward Adjustments used, where appropriate to track the effect of lower-than-expected cumulative costs on the future cumulative cash flow of the project.

**Appendix 2** also shows the cumulative cash flow for the project based on actual expenditures to date and the current construction schedule and forecast of year-by-year costs going forward. This information is found under the heading "**Actual through December 2013 plus Projected.**"

## Appendix 2

PUBLIC VERSION

**RESTATED and UPDATED CONSTRUCTION EXPENDITURES**  
(Thousands of \$)

## V.C. Summer Units 2 and 3 - Summary of SCE&amp;G Capital Cost Components

Per Order 2012-884 Adjusted	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Annual Project Cash Flow(per order)	5,516,849	21,723	100,905	340,003	398,551	349,061	713,307	950,179	1,007,569	831,281	521,351	201,408	81,510
Capital Cost Rescheduling Contingency	-	-	-	-	-	-	-	-	-	-	-	-	-
Budget Carry-Forward Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-
Net	5,516,849	21,723	100,905	340,003	398,551	349,061	713,307	950,179	1,007,569	831,281	521,351	201,408	81,510
Adjusted for Change in Escalation	5,322,398	21,723	100,905	340,003	398,551	349,061	704,909	927,475	951,591	773,707	478,408	196,141	79,922
Cumulative Project Cash Flow(Target)		21,723	122,629	462,632	861,183	1,210,244	1,915,153	2,842,628	3,794,219	4,567,927	5,046,335	5,242,476	5,322,398

Actual through December 2013* plus Projected	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Plant Cost Categories													
Fixed with No Adjustment													
Firm with Fixed Adjustment A													
Firm with Fixed Adjustment B													
Firm with Indexed Adjustment													
Actual Craft Wages													
Non-Labor Costs													
Time & Materials													
Owners Costs													
Transmission Costs	329,512	-	26	724	927	11,964	51,641	57,051	69,527	87,917	61,464	8,271	-
Total Base Project Costs(2007 \$)	4,548,405	21,723	97,386	319,073	374,810	314,977	488,425	452,652	785,051	730,150	528,125	304,355	131,677
Total Project Escalation	870,428	-	3,519	20,930	23,741	34,084	74,481	84,917	164,559	174,428	138,914	102,077	48,778
Total Revised Project Cash Flow	5,418,833	21,723	100,905	340,003	398,551	349,061	562,906	537,569	949,610	904,578	667,039	406,432	180,455
Cumulative Project Cash Flow(Revised)		21,723	122,629	462,632	861,183	1,210,244	1,773,150	2,310,719	3,260,328	4,164,906	4,831,945	5,238,378	5,418,833
AFUDC(Capitalized Interest)	261,355	645	3,497	10,564	17,150	14,218	18,980	27,721	38,296	52,209	38,693	26,873	12,510
Gross Construction	5,680,188	22,368	104,403	350,567	415,701	363,278	581,886	565,290	987,906	956,787	705,732	433,305	192,965
Construction Work In Progress		22,368	126,771	477,338	893,039	1,256,317	1,838,203	2,403,493	3,391,399	4,348,186	5,053,918	5,487,224	5,680,188
CWIP Currently in Rates													2,105,781
December 31, 2013 Actual Incremental CWIP Not Currently in Rates													297,714

\*Applicable index escalation rates for 2013 are estimated. Escalation is subject to restatement when actual indices for 2013 are final.

## Notes:

2014-2018 AFUDC rate applied

7.37%

The AFUDC rate applied is the current SCE&G rate. AFUDC rates can vary with changes in market interest rates, SCE&G's embedded cost of capital, capitalization ratios, construction work in process, and SCE&G's short-term debt outstanding.

**APPENDIX 3**

**V. C. Summer Nuclear Station Units 2 & 3**

**Quarterly Report to the South Carolina Office of Regulatory Staff  
Submitted by South Carolina Electric & Gas Company  
Pursuant to Public Service Commission Order No. 2009-104(A)**

**Quarter Ending December 31, 2013**

For comparison purposes, **Appendix 3** provides the schedule of capital costs for the project which was approved by the Commission in Order No. 2012-884 as the Approved Capital Cost of the Units, pursuant to S.C. Code Ann. § 58-33-270(B)(2). **Appendix 3** also reflects the forecast of AFUDC expense based on these adjusted schedules and the AFUDC rates that were current at the time of Order No. 2012-884. **Appendix 3** is intended to provide a fixed point of reference for future revisions and updating. While the schedule of costs contained on **Appendix 3** is subject to revision for escalation, changes in AFUDC rates and amounts, capital cost scheduling contingencies and other contingency adjustments as authorized in Order No. 2009-104(A), no such adjustments have been made to the schedules presented here.

## Appendix 3

PUBLIC VERSION

**RESTATED and UPDATED CONSTRUCTION EXPENDITURES**

(Thousands of \$)

**V.C. Summer Units 2 and 3 - Summary of SCE&G Capital Cost Components**

Per Order 2012-884

Plant Cost Categories	Total	Actual					Projected						
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fixed with No Adjustment													
Firm with Fixed Adjustment A													
Firm with Fixed Adjustment B													
Firm with Indexed Adjustment													
Actual Craft Wages													
Non-Labor Costs													
Time & Materials													
Owners Costs													
Transmission Costs	329,512	-	26	724	927	11,964	57,206	56,903	57,508	77,990	64,727	1,537	-
Total Base Project Costs(2007 \$)	4,548,405	21,723	97,386	319,073	374,810	314,977	613,678	780,753	792,394	647,295	386,537	142,999	56,781
Total Project Escalation	968,444	-	3,519	20,930	23,741	34,084	99,830	169,425	215,175	183,987	134,815	58,409	24,729
Total Revised Project Cash Flow	5,516,849	21,723	100,905	340,003	398,551	349,061	713,307	950,179	1,007,569	831,281	521,351	201,408	81,510
Cumulative Project Cash Flow(Revised)		21,723	122,629	462,632	861,183	1,210,244	1,923,551	2,873,730	3,881,299	4,712,580	5,233,931	5,435,339	5,516,849
AFUDC(Capitalized Interest)	237,715	645	3,497	10,564	17,150	14,218	20,449	38,384	42,868	40,888	27,518	15,391	6,144
Construction Work In Progress		22,368	126,771	477,338	893,039	1,256,317	1,990,074	2,978,637	4,029,074	4,901,243	5,450,113	5,666,911	5,754,565

**APPENDIX 4**

**V. C. Summer Nuclear Station Units 2 & 3**

**Quarterly Report to the South Carolina Office of Regulatory Staff  
Submitted by South Carolina Electric & Gas Company  
Pursuant to Public Service Commission Order No. 2009-104(A)**

**Quarter Ending December 31, 2013**

**Appendix 4** shows the changes in the inflation indices approved in Order No. 2009-104(A). Included is a ten year history of the Handy-Whitman All Steam Index, South Atlantic Region; the Handy-Whitman All Steam and Nuclear Index, South Atlantic Region; the Handy-Whitman All Transmission Plant Index, South Atlantic Region; and the Chained GDP Index. The change in the relevant indices from the Combined Application is also provided.

## Appendix 4, Chart A

### Inflation Indices, Chart A

HW All Steam Generation Plant Index, July 2013

<u>Year</u>	<u>Index</u>	<u>Yr/Yr change</u>	<u>Three Year Average</u>	<u>Five Year Average</u>	<u>Ten Year Average</u>
2013	596	2.05%	2.91%	2.18%	4.77%
2012	584	1.92%	3.82%	3.60%	4.67%
2011	573	4.75%	2.31%	4.75%	
2010	547	4.79%	3.78%	5.31%	
2009	522	-2.61%	4.74%	5.50%	
2008	536	9.16%	8.13%	7.35%	
2007	491	7.68%	6.99%	5.74%	
2006	456	7.55%	6.64%	4.75%	
2005	424	5.74%	4.49%		
2004	401	6.65%	3.50%		
2003	376	1.08%			
2002	372	2.76%			
2001	362				

#### HW All Steam Index:

One year  
Five Year

<b>BLRA Filing <u>Jul-07</u></b>	<b>Order 2010-12 <u>Jan-09</u></b>	<b>Order 2011-345 <u>Jul-10</u></b>	<b>Order 2012-884 <u>Jan-12</u></b>	<b>Update <u>Jul-13</u></b>
<b>7.68%</b>	<b>4.83%</b>	<b>4.79%</b>	<b>4.51%</b>	<b>2.05%</b>
<b>5.74%</b>	<b>7.19%</b>	<b>5.31%</b>	<b>3.91%</b>	<b>2.18%</b>

## Appendix 4, Chart B

### Inflation Indices, Chart B

HW All Steam and Nuclear Generation Plant Index, July 2013

<u>Year</u>	<u>Index</u>	<u>Yr/Yr change</u>	<u>Three Year Average</u>	<u>Five Year Average</u>	<u>Ten Year Average</u>
2013	596	2.05%	2.97%	2.22%	4.79%
2012	584	2.10%	3.82%	3.64%	4.70%
2011	572	4.76%	2.31%	4.76%	
2010	546	4.60%	3.78%	5.32%	
2009	522	-2.43%	4.82%	5.55%	
2008	535	9.18%	8.15%	7.37%	
2007	490	7.69%	7.00%	5.75%	
2006	455	7.57%	6.66%	4.77%	
2005	423	5.75%	4.50%		
2004	400	6.67%	3.50%		
2003	375	1.08%			
2002	371	2.77%			
2001	361				

#### HW All Steam/Nuclear Index:

One year  
Five Year

<b>BLRA Filing <u>Jul-07</u></b>	<b>Order 2010-12 <u>Jan-09</u></b>	<b>Order 2011-345 <u>Jul-10</u></b>	<b>Order 2012-884 <u>Jan-12</u></b>	<b>Update <u>Jul-13</u></b>
<b>7.69%</b>	<b>4.84%</b>	<b>4.60%</b>	<b>4.52%</b>	<b>2.05%</b>
<b>5.75%</b>	<b>7.20%</b>	<b>5.32%</b>	<b>3.87%</b>	<b>2.22%</b>

## Appendix 4, Chart C

### Inflation Indices, Chart C

HW All Transmission Plant Index, July 2013

<u>Year</u>	<u>Index</u>	<u>Yr/Yr change</u>	<u>Three Year Average</u>	<u>Five Year Average</u>	<u>Ten Year Average</u>
2013	594	1.71%	2.13%	1.09%	4.91%
2012	584	-0.17%	3.25%	2.56%	4.71%
2011	585	4.84%	1.30%	4.36%	
2010	558	5.08%	2.71%	5.23%	
2009	531	-6.02%	3.96%	5.48%	
2008	565	9.07%	9.02%	8.73%	
2007	518	8.82%	8.11%	6.86%	
2006	476	9.17%	8.58%	5.25%	
2005	436	6.34%	5.43%		
2004	410	10.22%	3.59%		
2003	372	-0.27%			
2002	373	0.81%			
2001	370				

	<b>BLRA Filing Jul-07</b>	<b>Order 2010-12 Jan-09</b>	<b>Order 2011-345 Jul-10</b>	<b>Order 2012-884 Jan-12</b>	<b>Update Jul-13</b>
<b><u>HW All Transmission Plant Index</u></b>					
One year	8.82%	7.41%	5.08%	2.48%	1.71%
Five Year	6.86%	8.60%	5.23%	3.00%	1.09%



**Appendix 4**  
**Inflation Indices, Chart D**  
**GDP Chained Price Index, 2013**

SERIES TYPE	UNIT	SHORT LABEL	ID	2007	2008	2009	2010	2011	2012	2013
<b>Chained Price Index--Gross Domestic Product</b>										
U.S. Macro - 10 Year Baseline	(2005=100)	Chained price index-gross domestic product , Source: BEA , Units: index- 2005=100.0	45158933	97.02	99.21	100.00	101.22	103.20	105.01	106.08
Annual Percent change					<b>2.20%</b>	<b>0.88%</b>	1.34%	2.14%	1.78%	1.49%
3-Year Annual Percent change					2.78%	1.67%	1.47%	1.45%	1.75%	1.74%
5-Year Annual Percent change					<b>2.90%</b>	<b>2.51%</b>	<b>2.11%</b>	<b>1.70%</b>	<b>1.67%</b>	<b>1.45%</b>
<b>Consumer Price Index, All-Urban</b>										
U.S. Macro - 10 Year Baseline	Index	Consumer price index, all-urban , Source: BLS , Units: - 1982-84=1.00	45158182	2.07	2.16	2.15	2.18	2.25	2.30	2.32
Percent change					4.17%	-0.46%	1.40%	3.21%	2.22%	1.55%
3-Year Annual Percent change					3.42%	2.17%	1.68%	1.37%	2.27%	2.33%
5-Year Annual Percent change					3.26%	2.62%	2.23%	2.22%	2.10%	1.58%
<b>Producer Price Index--Finished Goods</b>										
U.S. Macro - 10 Year Baseline	(1982=1.0)	Producer price index-finished goods , Source: BLS , Units: Index- 1982=1.0	45159751	1.67	1.78	1.73	1.80	1.91	1.94	1.96
Percent change					6.59%	-2.81%	4.05%	6.11%	1.57%	1.54%
3-Year Annual Percent change					4.50%	2.64%	2.53%	2.38%	3.89%	3.07%
5-Year Annual Percent change					4.43%	3.03%	2.90%	3.61%	3.04%	2.09%

	BLRA Filing Jul-07	Order 2010-12 Jan-08	Order 2011-345 Jul-10	Order 2012-884 Jan-12	Update Jul-13
<b>GDP Chained Price Index</b>					
One year	2.88%	2.24%	0.43%	2.11%	1.48%
Five Year	2.81%	2.88%	1.97%	1.69%	1.48%

**APPENDIX 5**

**V. C. Summer Nuclear Station Units 2 & 3**

**Quarterly Report to the South Carolina Office of Regulatory Staff  
Submitted by South Carolina Electric & Gas Company  
Pursuant to Public Service Commission Order No. 2009-104(A)**

**Quarter Ending December 31, 2013**

**Appendix 5** indicates those LARs that have been submitted by SCE&G to the NRC for review. Included is the title of each LAR, a brief description of the change(s) associated with the LAR, the date the LAR was submitted to the NRC, and the status of the requests.

**V.C. Summer Units 2 and 3 License Amendment Requests (LARs)**

<b>Topic</b>	<b>Description of Change</b>	<b>Submittal Date</b>	<b>Status</b>
LAR 12-01 - Additional Electrical Penetration Assemblies	Provide additional penetrations of the Containment Vessel to allow sufficient space for electrical and instrument cables.	8/29/2012	Approved on 7/1/2013
LAR-12-02 – Tier 1 Table 3.3-1 Discrepancies – PAR Utilized	Conform the current ITAAC standards used to verify the shield building wall thickness to align with those approved in DCD Rev. 19	9/26/2012	Approved on 5/30/2013
LAR 13-01 - Basemat Shear Reinforcement Design Spacing Requirements - PAR Utilized	Clarify the provisions for maximum spacing of the shear reinforcement in the basemat below the auxiliary building to be consistent with requirements shown in existing FSAR figures.	1/15/2013	Approved on 2/26/2013
LAR 13-02 - Basemat Shear Reinforcement Design Details - PAR Utilized	Revises the requirements for development of basemat shear reinforcement in the licensing basis from ACI 349 Appendix B to ACI 318-11, Section 12.6. The use of ACI 318 criteria for headed reinforcement results in longer shear ties and thicker concrete in areas below the elevator pits and a sump in the nuclear island basemat.	1/18/2013	Approved on 3/1/2013
LAR 13-03 - Turbine Building Eccentric and Concentric Bracing	Revises the turbine building main area to use a mixed bracing system using eccentrically and concentrically braced frames as a means of preventing the turbine building from collapsing onto the Nuclear Island (NI) during a seismic event. The structural design code is also changed to a code that includes adequate provisions for the new bracing system.	2/7/2013	Approved on 7/1/2013
LAR 13-04 - Reconciliation of Tier 1 Valve Differences	Reconciles valve related information contained in Tier 1 material to be consistent with corresponding Tier 2 material currently incorporated in the UFSAR.	2/7/2013	Under NRC Review

*The gaps in LAR number sequencing are due to the order of submittal to the NRC.*

**V.C. Summer Units 2 and 3 License Amendment Requests (LARs)**

<b>Topic</b>	<b>Description of Change</b>	<b>Submittal Date</b>	<b>Status</b>
LAR 13-05 - Structural Modules Shear Stud Size and Spacing	Revises Note 2 of UFSAR Figure 3.8.3-8, Sheet 1, which presents typical structural wall module details. This information needs to be changed to be consistent with the design basis calculations.	2/14/2013	Approved on 5/23/2013
LAR 13-06 - Primary Sampling System Changes	Alters the design of the Primary Sampling System (PSS) by replacing a check valve with a solenoid-operated gate valve, modifying the PSS inside-containment header and adding a PSS containment penetration.	2/7/2013	Approved on 8/22/2013
LAR 13-07 - Changes to the Chemical and Volume Control System (CVS)	Alters the design of the Chemical and Volume Control System (CVS) by adding/changing valves, separating the zinc and hydrogen injection paths and relocating the zinc injection point.	3/13/2013	Under NRC Review
LAR 13-08 - Module Obstructions and Details	Withdrawn after review with NRC-see Letter NND-13-202. <i>Superseded by LAR 13-20.</i>	2/28/2013	Withdrawn
LAR 13-10 - Human Factors Engineering Integrated System Validation Plan	Revises referenced document APP-OCS-GEH-320 From revision D to Revision 2.	3/13/2013	Under NRC Review
LAR 13-11 - NI Wall Reinforcement Criteria -PAR Utilized	Revises structural code criteria for anchoring reinforcement bar within the NI walls (adopts ACI-318 for this purpose).	3/26/2013	Approved on 6/6/2013
LAR 13-12 - Fire Area Boundary Changes	Revises various information to support fire area boundaries (HVAC information, stairwell changes, and other layout changes.)	7/17/2013	Under NRC Review

*The gaps in LAR number sequencing are due to the order of submittal to the NRC.*

**V.C. Summer Units 2 and 3 License Amendment Requests (LARs)**

Topic	Description of Change	Submittal Date	Status
LAR 13-13 - Turbine Building Layout Changes	Revises the door location, clarifies column line designations, changes floor to ceiling heights and increases elevations and wall thickness in certain areas.	7/30/2013	Under NRC Review
LAR 13-14 - Turbine Building Battery Room and Electrical Changes	Revises the Non-Class 1E dc and Uninterruptible Power Supply System (EDS) and Class 1E dc and Uninterruptible Power Supply System (IDS) by: (1) Increasing EDS total equipment capacity, component ratings, and protective device sizing to support increased load demand, (2) Relocating equipment and moving Turbine Building (TB) first bay EDS Battery Room and Charger Room. The floor elevation increases from elevation 148'-0" to elevation 148'-10" to accommodate associated equipment cabling with this activity, and (3) Removing the Class 1E IDS Battery Back-up tie to the Non-Class 1E EDS Battery.	10/2/2013	Under NRC Review
LAR 13-15 - Operator Break Room Configuration	No description provided. This is no longer a LAR.	Changed to a Non-LAR Departure	
LAR 13-16 - Revision to Human Factors Engineering Design Verification Plan (GEH-120)	Revises referenced document APP-OCS-GEH-120 from Revision B to Revision 1.	9/25/2013	Under NRC Review
LAR 13-17 - Revision to Human Factors Engineering Task Support Verification (GEH-220)	Revises referenced document APP-OCS-GEH-220 from Revision B to Revision 1.	9/25/2013	Under NRC Review

*The gaps in LAR number sequencing are due to the order of submittal to the NRC.*

**V.C. Summer Units 2 and 3 License Amendment Requests (LARs)**

<b>Topic</b>	<b>Description of Change</b>	<b>Submittal Date</b>	<b>Status</b>
LAR 13-18 - Revision to Human Factors Engineering Issue Resolution Plan	Revises APP-OCS-GEH-420 to make a number of changes in order to refine the process for capturing and resolving Human Engineering Discrepancies (HEDs) from that process document as described in Revision B.	10/3/2013	Under NRC Review
LAR 13-19 - Revision to Human Factors Engineering Plan	Revises APP-OCS-GEH-520 to make a number of changes in order to confirm aspects of the HSI and OCS design features that could not be evaluated in other Human Factors Engineering (HFE) V&V activities.	10/3/2013	Under NRC Review
LAR 13-20 - Modules / Stud Channel Obstructions Revision	Revises requirements for design spacing of shear studs and wall module trusses and the design of structural elements of the trusses such as angles and channels. These revisions are to address interferences and obstructions.	7/17/2013	Approved on 11/19/13
LAR 13-25 - Tier 1 Editorial and Consistency Changes	Revises information to correct consistency and editorial issues. This submittal does not contain any technical changes.	7/2/2013	Under NRC Review
LAR 13-26 - EP Rule Changes	Revision to the Emergency Plan in order to comply with regulatory changes enacted by the Nuclear Regulatory Commission (NRC) in the Final Rule. These changes include the addition of text that 1) clarifies the distance of the Emergency Operations Facility (EOF) from the site, 2) updates the content of exercise scenarios to be performed at least once each exercise cycle, and 3) requires the Evacuation Time Estimate (ETE) to be updated annually between decennial censuses.	12/17/2013	Under NRC Review
LAR 13-32 - WLS Changes	Clarifies the description of the WLS, including changing depiction of valves to be consistent with Tier 1 figure conventions, ensuring consistency between Tier 1 and Tier 2 descriptions, and clarifying the safety classification of the drain hubs.	8/30/2013	Under NRC Review

*The gaps in LAR number sequencing are due to the order of submittal to the NRC.*

**V.C. Summer Units 2 and 3 License Amendment Requests (LARs)**

Topic	Description of Change	Submittal Date	Status
LAR 13-37 - VCSNS Units 2 & 3 Tech Spec Upgrade	Revises Technical Specifications to closer align with the guidance of the Technical Specifications Task Force (TSTF) Writer's Guide for Plant-Specific Improved Technical Specifications, TSTF-GG-05-01, Revision 1, and with NUREG-1431, Standard Technical Specifications - Westinghouse Plants as updated by NRC approved generic changes.	12/4/2013	Under NRC Review
LAR 13-38 - ACI Code Compliance with Critical Sections Higher Elevations	Withdrawn after review with NRC-see Letter NND-13-0745.	11/7/2013	Withdrawn
LAR 13-41 - Coating Thermal Conductivity	Revises Design Control Document (DCD) Tier 2 information as incorporated into the Updated Final Safety Analysis Report (UFSAR) to allow use of a new methodology to determine the effective thermal conductivity resulting from oxidation of the inorganic zinc (IOZ) used in the containment vessel coating system.	11/26/2013	Under NRC Review

*The gaps in LAR number sequencing are due to the order of submittal to the NRC.*